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Name _____ Date _____

Practice: For use after Lesson 6.2, Algebra 2 with Trigonometry

Algebra 2
Unit 4: WS #4

**Polynomials: Classification, Addition,
and Subtraction**

Classify each polynomial as a monomial, a binomial, or a trinomial. Then give the degree of the polynomial.

1. $2x^2 - 7x + 3$ _____ 2. $-13c^4$ _____

3. $5m^2n^3 - 9mn^2$ _____ 4. $-0.3rst$ _____

Simplify.

5. $5a + 3c - 6a + 8 + c$ _____

6. $2x^2y - 5xy^2 + 9xy^2 + x^2y$ _____

7. $-2r + 8 + 2r^2 - 7r - r^2$ _____

8. $r^2 + 3r^2s - 11r^2 + s^2 - 3r^2s$ _____

Add or subtract as indicated.

9.
$$\begin{array}{r} 2c^2 - 7c - 1 \\ +4c^2 + 6c - 7 \\ \hline \end{array}$$
 10.
$$\begin{array}{r} -3r + 2t \\ -(r - 5s + 3t) \\ \hline \end{array}$$

Add or subtract as indicated.

11. $(8x^3 - 11x^2 + 5x - 10) + (-5x^3 - x^2 + 3x + 1)$ _____

12. $(x^3 - 5x^2y + 3xy^2 - 7y^3) - (-3xy^2 - 2x^3 + x^2y)$ _____

Applications

15. **Business** Gregory's annual salary is \$19,000. Let x represent his annual percent increase expressed as a decimal. Express Gregory's next year's salary as a polynomial in x . _____

16. **Geometry** Express the perimeter of a rectangle with a width of $5x$ and length of $5x + 7$ cm as a polynomial. _____

MIXED PRACTICE

Simplify.

17. $x^5 \cdot x^7$ _____ 18. $(c^2d)^3$ _____

19. $\frac{z^7}{z^6}$ _____ 20. $(2a)^4$ _____

21. $(5a^4 - 3a^2) - (-5a^4 - 2a^2)$ _____